Data Nexus
A Model for Creating an Integrated Data Ecosystem to Enable a More Effective Academic Research Organization

Melanie Funes, PhD
Director, Strategic Implementation
Associate Director, Research Development

Southern California Clinical and Translational Science Institute (SC CTSI) at USC and CHLA
Data Nexus development team

Planning, Evaluation and Tracking

- Melanie Funes, PhD
  Director, Strategic Implementation
- Eun Evans, PhD
  Project Manager
- Annie Hong, BS
  Program Coordinator
- April Bagaporro, BS
  Program Coordinator

eHome: Digital Innovation

- Katja Reuter, PhD
  Director, Digital Strategy and eHome
- Praveen Angyan, MS
  Technical Lead
- Bruce Park, MS
  Web Developer
- Ed Ward
  Web Developer
- John Burgos, MS
  Project Manager
The CTSA Evaluation Unit challenge

- Demonstrate value in a concrete way to stakeholders
- Introduce approaches to create a strategic organization
- Increase alignment between program and institute priorities
- Provide support to develop goals, target and metrics of success
- Assess progress toward goals and targets
- Develop strategies and approaches to improve performance
- Build tools and best practices to achieve excellence
- Enable data-driven decision making
At the end of the day…it all comes down to

...Use, Cost, Quality, Outcomes, Impact

- How we measure and track it (innovation)
- How we use the data (decision making, continuous improvement)
NCATS, we have a problem...
...connecting the data dots

The right data at the right time is crucial

- Actionable insight
- Informs course correcting decisions
- Adjust service provision (maximize resources – minimize costs)
...connecting the data dots

We need critical data connections

- Activities + Individuals + Outcomes
...connecting the data dots

Data Nexus, a technical solution
  - Automated *data aggregation* from multiple sources
...connecting the data dots

Data Nexus, a technical solution
- Automated *data aggregation* from multiple sources
- Subsequent *data distribution* across multiple outputs
...connecting the data dots to create a

Data Ecosystem

for tracking use, cost, quality, outcomes, and impact
Data Nexus an integrated Data Ecosystem

INFORMATION INPUT SYSTEMS
(Investigators, Services, Outcomes)

Consultation Services Tracker
SC CTSI “Get Expert Advice”

Program Activity Tracker
SC CTSI Intranet

Pilot $ and K/T Tracker
e-GATE

Collect Investigator Information
Formstack: Online Form Builder

Track Service Provision
HelpSpot: Service Tracking System

Collect Activity Information
Formstack: Online Form Builder

HR Datafeed

Validation

INFORMATION OUTPUT SYSTEMS

Databases
Internal: C&G, Kuali, iStar, OTT, HR Datafeed
External: PubMed, eRA, Edison, News

Service Invoicing
Zoho: Business Invoicing Application

Service Reports

Performance Management
ClearPoint Strategy: Balanced Scorecard Software

Communication
Real-time updates, Web syndication

Survey System
Progress Reporting Survey System

Satisfaction Survey
Service Agreement
A data ecosystem is crucial...

...but not enough for a long lasting culture-shift in decision-making
Of more importance...

New approaches + Training + Trust

Using IT is the hardest part.
The possibilities are endless…

- Oakland A’s (Billy Beane) + Bill James (stats)
- Laser focus on winning
- 2003: Run vs walk? Doesn’t matter (on-base %)
- Outcome: Winning team with less money
- “Stats revolution that changed baseball” Joe Delessio
The possibilities are endless...

- 2003 – budget deficit and on the decline
- Underestimating core business and strengths
- Didn’t understand where they were making $
- Data + operational focus + forecasting needs
- World’s largest toy manufacturer
The possibilities are endless…

- Track
- Analyze
- Predict
- Succeed by giving people what they want
The possibilities are endless…

- Mission – Predict, measure, and improve the return on social investments
- Use data to develop strategies to move the needle on intended outcomes

Join us in this game changing work to develop predictive data for the social sector.

Read more

www.missionmeasurement.com
What can CTSAs do next with data…

...to enable new data-driven decision making models for academia?

...to better understand ourselves?

...to identify our unique strengths?

...to measure and articulate our impact?

...to predict success of our clinical and translational research portfolios?

...to strategically invest and do more with less?
Thank You